

Comparisons of Job Characteristics

Focus Occupation: Nuclear Engineers (17-2161)

Associated Occupation: Architectural and Engineering Managers (11-9041)

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| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Nuclear Engineers (17-2161)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Engineering and Technology | 5.7 | 23.2 | 24.3 | 0 | Current knowledge level may be sufficient |
| Design | 5.2 | 19.0 | 17.3 | 0 | Current knowledge level may be sufficient |
| Mathematics | 9.2 | 17.4 | 19.9 | > | Current knowledge level is likely sufficient |
| Computers and Electronics | 8.4 | 16.9 | 15.9 | 0 | Current knowledge level may be sufficient |
| Administration and Management | 8.4 | 14.4 | 13.0 | < | Expanded education and/or training may be required |
| Physics | 4.3 | 13.0 | 20.8 | >> | Current knowledge level is likely more than sufficient |
| Building and Construction | 4.0 | 10.7 | 8.2 | << | Extensive education and/or training may be required |
| Production and Processing | 6.0 | 10.7 | 7.6 | << | Extensive education and/or training may be required |
| Personnel and Human Resources | 5.6 | 10.4 | 8.1 | < | Expanded education and/or training may be required |
| Economics and Accounting | 4.4 | 8.1 | 6.0 | << | Extensive education and/or training may be required |
| Telecommunications | 3.9 | 7.4 | 4.6 | << | Extensive education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 75

Focus Occupation: Nuclear Engineers (17-2161)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|--|--------------------------------|
|---|---------------------------------|--------------------------------|---------------------------|--|--------------------------------|

| | | | | | |
|-----------------------------------|-----|------|------|----|--|
| Operations Analysis | 5.0 | 13.9 | 15.7 | > | Skill level is likely sufficient |
| Coordination | 9.1 | 13.3 | 11.8 | < | A higher skill level may be required |
| Complex Problem Solving | 9.1 | 13.0 | 12.8 | 0 | Current skill level may be sufficient |
| Time Management | 8.9 | 12.8 | 10.8 | < | A higher skill level may be required |
| Management of Personnel Resources | 6.9 | 12.2 | 8.6 | << | Extensive development of skills in this area may be required |
| Mathematics | 6.2 | 11.7 | 11.9 | 0 | Current skill level may be sufficient |
| Systems Analysis | 6.5 | 10.7 | 12.6 | > | Skill level is likely sufficient |
| Systems Evaluation | 6.4 | 10.7 | 11.8 | > | Skill level is likely sufficient |
| Negotiation | 6.8 | 10.2 | 8.3 | < | A higher skill level may be required |
| Management of Financial Resources | 3.3 | 9.7 | 5.0 | << | Extensive development of skills in this area may be required |
| Management of Material Resources | 3.7 | 9.2 | 6.4 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Abilities | | Similarity of Focus Occupation to Associated Occupation: 97 | | | |
|---|---------------------------------|---|---------------------------|--------------------------------|---|
| Focus Occupation: Nuclear Engineers (17-2161) | | | | | |
| Associated Occupation: Architectural and Engineering Managers (11-9041) | | | | | |
| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
| Written Comprehension | 11.0 | 15.2 | 16.2 | 0 | Current ability level may be sufficient |
| Oral Comprehension | 12.5 | 15.0 | 17.0 | > | Current ability level is likely sufficient |
| Deductive Reasoning | 10.6 | 13.9 | 13.8 | 0 | Current ability level may be sufficient |
| Problem Sensitivity | 11.1 | 13.9 | 16.6 | > | Current ability level is likely sufficient |
| Written Expression | 9.8 | 13.8 | 14.8 | 0 | Current ability level may be sufficient |
| Mathematical Reasoning | 6.3 | 13.3 | 11.2 | < | Some improvement in abilities may be required |
| Information Ordering | 9.9 | 12.0 | 12.0 | 0 | Current ability level may be sufficient |
| Category Flexibility | 9.0 | 11.4 | 12.2 | 0 | Current ability level may be sufficient |
| Number Facility | 6.3 | 11.2 | 10.6 | 0 | Current ability level may be sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common | | Similarity of Focus Occupation to Associated Occupation: 81 |
|--|--|---|
| Focus Occupation: Nuclear Engineers (17-2161) Associated Occupation: Architectural and Engineering Managers (11-9041) | | |
| Work Activities | | Exclusivity of Activity |
| Adhere to safety procedures | | 12 |
| Advise clients or customers | | 19 |

| | |
|---|----|
| Advise clients regarding engineering problems | 67 |
| Analyze project proposal to determine feasibility, cost, or time | 69 |
| Bid engineering, construction or extraction projects | 80 |
| Communicate technical information | 4 |
| Confer with engineering, technical or manufacturing personnel | 25 |
| Coordinate engineering project activities | 71 |
| Delegate authority for engineering activities | 73 |
| Develop policies, procedures, methods, or standards | 21 |
| Develop safety regulations | 74 |
| Direct and coordinate activities of workers or staff | 3 |
| Direct personnel in support of engineering activities | 74 |
| Estimate cost for engineering projects | 69 |
| Estimate time needed for project | 64 |
| Evaluate costs of engineering projects | 70 |
| Evaluate engineering data | 60 |
| Lead teams in engineering projects | 73 |
| Perform statistical analysis in physical science or geological research | 71 |
| Plan testing of engineering methods | 72 |
| Prepare reports | 8 |
| Prepare technical reports or related documentation | 22 |
| Read blueprints | 10 |
| Read schematics | 34 |
| Read technical drawings | 7 |
| Resolve engineering or science problems | 46 |
| Understand engineering data or reports | 48 |
| Understand technical operating, service or repair manuals | 6 |
| Use intuitive judgment for engineering analyses | 72 |
| Use long or short term production planning techniques | 74 |
| Use pollution control techniques | 62 |
| Use project management techniques | 47 |
| Use scientific research methodology | 21 |
| Use technical regulations for engineering problems | 61 |
| Write business project or bid proposals | 48 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 39

Focus Occupation: Nuclear Engineers (17-2161)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Tools and Technologies | Exclusivity |
|--|-------------|
| Computers | 1 |
| Content authoring and editing software | 1 |
| Data management and query software | 1 |

| | |
|----------------------------|---|
| Industry specific software | 1 |
| Safety apparel | 4 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.